SECTION 09843

ACOUSTICAL CEILING CLOUDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.02 SUMMARY

A. Section Includes:
   1. Acoustical clouds
   2. Attachment hangers and fasteners

B. Related Sections:
   1. Section 09511 – Suspended Acoustical Ceilings
   2. Section 09260 – Gypsum Board Assemblies
   3. Division 15 Sections - HVAC
   4. Division 16 Sections - Electrical

1.03 REFERENCES

A. American Society for Testing and Materials (ASTM):

   1. ASTM C 423: Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
   2. ASTM E 84; **2004**: Standard Test Method for Surface Burning Characteristics of Building Materials.
   3. ASTM E 1477: Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.

B. 2006 Virginia Uniform Statewide Building Code

1.04 SUBMITTALS

A. Product Data: Submit manufacturer’s technical data for each type of cloud system required.

B. Installation Instructions: Submit manufacturer’s installation instructions.

C. Shop Drawings: Layout and details of acoustical clouds. Show locations of items which are to be coordinated with acoustical clouds.

D. Certifications: Manufacturer’s certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards.

1.05 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical clouds and method of attachment by a single manufacturer.

B. Coordination of Work: Coordinate acoustical cloud work with installers of related work including, but not limited to suspended ceilings, building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

C. Seismic Performance: The VUSBC allows architectural components to swing freely as long as they will not be damaged or cause damage. Acoustical Clouds suspended individually with aircraft cable will swing no more than 18 inches in any direction for each panel. Shapes direct attached to drywall or suspended in group systems have been engineered for application in all seismic areas.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical clouds to project site in original, unopened packages and store them in a fully enclosed space between 40°F (4° C) and 120°F (49° C) where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes. All wet work (plastering, concrete, etc) must be complete and dry.

B. Before installing acoustical clouds, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical clouds carefully to avoid damaging the surface and edges in any way.

1.07 PROJECT CONDITIONS

A. Space Enclosure:
Building areas to receive acoustical clouds shall be free of construction dust and debris. Products can be installed in temperatures between 40°F (4° C) and 120°F (49° C). Cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the acoustical cloud.

1.8 WARRANTY

A. Acoustical Clouds: Submit a written warranty executed by the manufacturer, agreeing to repair or replace acoustical clouds that fail within the warranty period. Failures include, but are not limited to:
   1. Acoustical clouds: Manufacturing defects.
   2. Attachment devices: Rusting and manufacturing defects.

B. Warranty Period:
   1. Acoustical Clouds: One (1) year from date of substantial completion.
   2. Attachment devices: One (1) year from date of substantial completion.

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Acoustical Clouds:
   1. Armstrong World Industries, Inc.: www.armstrong.com
   2. USG Corporation: www.usg.com
   3. Hunter Douglas Contract: www.hunterdouglascontract.com

B. Attachment devices:
   1. Armstrong World Industries, Inc. : www.armstrong.com

2. USG Corporation: www.usg.com
3. Hunter Douglas Contract: www.hunterdouglascontract.com

2.02 ACOUSTICAL CLOUD UNITS

A. Acoustical Cloud:
1. Surface Texture: Smooth
2. Composition: Fiberglass
3. Surface finish: Acoustically transparent membrane on front and edges
4. Color: White
5. Shapes:
   a. Nominal 4 foot x 6 foot Shape, Small Rectangle
6. Thickness: 7/8 inch
7. Edge Detail: Square edge
8. Flame Spread**/Smoke Developed**: (ASTM E 84), Class A
   a. Maximum Flame Spread: 25
   b. Maximum Smoke Developed: 450
9. Light Reflectance: (LR): (ASTM E 1477), White: 0.90
10. Acoustical Absorption: (ASTM C423), White: Minimum 1.17 Sabins/sf
11. Antimicrobial protection: Inherent - Resists the growth of mold/mildew and bacterial growth.
12. Basis of Design Product: SoundScapes Shapes, Item #5448, as manufactured by Armstrong World Industries.

2.03 ATTACHMENT SYSTEMS

1. Installation Hardware Kits for individual and group suspension as required by the manufacturer.

PART 3 - EXECUTION

3.01 PREPARATION

A. Measure each ceiling area and establish layout of acoustical clouds and installation hardware. Comply with reflected ceiling plans. Coordinate panel layout with mechanical, electrical and sprinkler fixtures.

3.02 INSTALLATION

A. Install panels in accordance with the manufacturer's instructions and in compliance with the authorities having jurisdiction.

3.03 ADJUSTING AND CLEANING

A. Replace damaged and broken panels.

B. Clean exposed surfaces of acoustical clouds per manufacturer's instructions.

END OF SECTION